CLIPPEDIMAGE= JP404165657A

PAT-NO: JP404165657A

DOCUMENT-IDENTIFIER: JP 04165657 A

TITLE: RESIN-SEALED SEMICONDUCTOR DEVICE

PUBN-DATE: June 11, 1992

INVENTOR-INFORMATION:

NAME

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ASSIGNEE-INFORMATION:

NAME COUNTRY NEC CORP N/A

APPL-NO: JP02292848

APPL-DATE: October 30, 1990

INT-CL (IPC): H01L023/29

US-CL-CURRENT: 257/675,257/690

ABSTRACT:

PURPOSE: To easily cope with an increase in the number of pins and

miniaturization by forming a wiring pattern on the surface of a resin substrate

integrally formed with a heat sink by plating and using one end section of the

wiring pattern as a leading-out terminal.

CONSTITUTION: A heat sink 1 which is provided for reducing a rise in the

thermal resistance of a semiconductor element 4 associated with an increase in

the power consumption of the element 4 is integrally formed with a resin

substrate 8. In addition, a wiring pattern 9 having a total thickness of about

10μ m is formed on the surface of the substrate 8 by successively forming a

Cu base film, Ni film, and Au film by electroless plating.

Each electrode 5 of

the element 4 is connected with the inner terminal electrodes 11 of the wiring

pattern 9 connected with leading-out terminals 10 by means of such metallic thin wires 6 as gold wires, etc. Therefore, a semiconductor device which has a structure in which the heat sink 1 can integrally be formed with the resin substrate 8 and can easily cope with an increase in the number of pins and miniaturization of the semiconductor element 4 can be obtained.

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APPLICATION INFORMATION

Title Line C : STRAPLESS LEAD FRAME

Total Drawing Sheets:: 7
Formal Drawings?:: Yes
Application Type:: Utility

Docket Number:: 22451

Secrecy Order in Parent Appl.?:: No

## REPRESENTATIVE INFORMATION

Registration Number One:: 32080
Registration Number Two:: 25673
Registration Number Three:: 28228
Registration Number Four:: 19906

## CONTINUITY INFORMATION

This application is a:: NONPROVISIONAL OF

> Application One:: 60/099,595

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